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ABSTRACT

This guide summarizes the information and techniques presented on an audiotape designed to teach students to use the keyword method to memorize new words. First, introductory comments provide a rationale for the development of the materials and a discussion of their use at Lane Community College. Next, a summary is provided of the key word method, outlining the following steps: (1) study the term or concept and its meaning until you understand it; (2) choose a keyword (i.e., a word that sounds partly like the term you want to memorize); (3) make a vivid mental image of the keyword, not the original word; (4) make a vivid mental image of the definition; (5) make an interactive image of the keyword and the definition; (6) practice going from word to keyword to image and interactive image, and seeing the image of the definition and translating it into the definition's words; (7) repeat until correct; and (8) practice in reverse. The remainder of the guide provides: detailed description of the keyword method; examples; suggestions for selecting good keywords and making good imagery; information on common mistakes to avoid; practice exercises; and suggestions for individualizing the method. (HB)

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HOW TO USE THE KEYWORD METHOD TO MEMORIZE NEW WORDS FAST AND SURELY. AN AUDIO TAPE FOR COLLEGE STUDENTS WITH A DETAILED OUTLINE AND INTRODUCTORY COMMENTS

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Many students of normal intelligence have trouble because they do not know how to memorize new material quickly and effectively. And this occurs despite the many fine books on memory skills that are available now. Often instructors do not know these techniques and simply suggest the use of flash cards and repetition. Much better techniques are available.

The keyword method is a fine and easy method. It is especially useful for people learning foreign languages and technical terminology. Abundant research on a wide variety of students has demonstrated its effectiveness. If more students knew it, they would be able to learn new vocabulary and hold in their heads during the initial awkward period until they had used it enough that it became part of their working vocabulary.

A comprehensive survey of the research on the effectiveness of the keyword method appeared recently. (Pressley, Michael, Levin, Joel R., and Harold D. Delaney, "The Mnemonic Keyword Method," Review of Educational Research, 1982, 52, 61-91.)

But most students will not learn how to use this outstanding memory technique it because they do not take how to study courses or encounter a teacher or fellow student who will show them how to do it. In order to overcome this barrier, I have summarized the method and made an audio tape describing the method. I have also printed up a detailed outline of the talk for the benefit of students who would prefer to read rather than listen or who do not wish to make handwritten notes as they listen to the tape.

It has occurred to me that perhaps educators at other colleges and high schools might find this material useful. Readers are welcome to use the outline in whole or in part as the basis for their own audio tapes or written materials. In fact, we could supply a copy of the tape as long as our costs are covered.

At Lane Community College our practice is to loan out the tape to students from the Testing Office (a deposit of $2.00 encourages its return), and it is for sale at the bookstore. And students can buy the outline for a nominal $0.25 to cover our printing costs.

In order to make how to study information easily accessible to students, we also provide 15 one-page and two-page study tips. They cover topics ranging from traditional areas like note-taking and memorizing to untraditional subjects like how to overcome negative attitudes, how to raise "intelligence", and how to

motivate oneself. (See ERIC document ED 219 120.) Each one is based on contemporary research in cognitive psychology, learning theory, or some other well-established source. We also have 3 other tapes and outlines. We have tapes on the following topics (they have been submitted to ERIC along with this one):

How to Lower Your Anxiety About Tests.
How to Prepare for Tests and Take them Effectively: What the Experts Say.
How to Teach Yourself Physical Skills.

Tapes in preparation are on conquering procrastination, effective techniques for studying math and science, and effective techniques for problem-solving math and science problems. Again all attempt to describe the results of modern research in psychology, cognitive psychology, and learning theory.

HOW TO USE THE KEYWORD METHOD TO MEMORIZE NEW WORDS FAST AND SURELY

by Daniel L. Hodges, Coordinator of Testing
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**NOTE: This is notes for a talk that is recorded on a cassette tape of the same name. The tape contains additional information.

Overview

It occurred to me that perhaps somebody listening to the tape would like a summary of the keyword method right in the first minute of the tape. So here it is.

*** You start with a word, technical term or concept that you wish to memorize.

1. BEFORE you try to memorize it, you study the term or concept and its meaning until you understand it.
2. Choose a keyword -- meaning a word that sounds partly like the term you want to memorize.
3. Make a vivid mental image of the keyword, not the original word.
4. Make a vivid mental image of the definition.
5. Make an interactive image of the keyword and the definition.
6. Practice thinking in your mind from word to keyword to image and interactive image and seeing image of definition and translating it into the definition's words. Do until correct.
7. Practice in reverse.

The Contents of the Rest of the Tape:

Detailed description of the keyword method, examples, how to select good keywords, how to make good imagery, common mistakes to avoid, some practice so you can tell when you've got it, some explanations and evidence and comments on how to make the method work for you.

Introduction

I've observed that many times students get low grades because they don't know how to study effectively, how to memorize, how to take tests.

Yet they think they're permanently stupid.

Wrong. Just studying the wrong way.

It's like trying to tighten a loose nut on a bicycle by using your bare fingers. Very hard. But if you use the right tool -- a wrench -- you'll do it right.

The same with studying. If you use the right method, you get better results and you get them faster. And there are good methods for memorizing. You don't have to be a genius to use them. Ordinary people learn them all the time.

Problem -- Goal -- Promise

Problem: You work to memorize new words.

1. Memorizing takes a long time.
2. After a day or two, you try to recall them but find you can't

retrieve new words from memory.

3. You get several words confused.

4. You can recognize words but cannot recall them. (Recall means: given word, you can pull the definition out of your memory -- even when cold.)

Goal: That you can memorize new words reliably and quickly.

That in the next few days, you can recall each word reliably. No confusion. You can both recognize and recall them.

My hobby has been to read the books and articles that the experts write about how to study fast and effectively and about how to memorize new things.

Promise: There are several methods that work.

Linking or chaining methods
Keyword method
Story mnemonic
Rehearsal
Rereading, restudy

*** We will use Keyword method.

Lots of research. Highly effective. Improves memory for people that psychologists have studied in research after research.

For example, three psychologists have reviewed 89 books and articles on memory for the famous REVIEW OF EDUCATIONAL RESEARCH in 1982. They found that almost everybody can learn more words and remember them better with the keyword method than with other methods.

It works on learning foreign words, new English words, scientific concepts, technical terms.

You can do it too.

Opening example of learning word.

Suppose you chose to learn the word CANINE. And suppose it was a new word to you and that you did not know it meant a DOG. Here is how I would use the keyword method to remember it.

CANINE sounds partly like a cane that an old man might walk around with. I make a mental picture of a standard black cane and an old man walking with it. And for the definition, a dog, I will imagine a dog I had when I was young, my brown-and-white collie dog Sunny. Now I'll put the two images into one image. I will imagine Sunny running up to the old man and barking at him, and I mentally see the old man raise his cane and hit Sunny with it. Thus I put CANINE and DOG into the same picture through the cane and Sunny.

Now I'll test myself to see if I can successfully use my mental images to remember it.

My self-test: "CANINE. The word sounds like a cane. I see the old man and his cane, see my dog Sunny in the same picture, running and barking at him. I see him raise his cane and hit Sunny. Seeing Sunny in the picture makes me think of dog. So I have started with canine and thought to dog. It works!"

I could also check if I could start with DOG and use the images of the dog and the cane to remind myself of CANINE. That works too.

The Seven Steps.

1. Study word and definition. Goal: Understand it.
2. Find sound-alike word. That's the Keyword.
3. Make an image of the keyword.
4. Make image of definition.
5. Make interactive image of Keyword & definition.
6. Practice thinking in your mind from word to keyword to keyword's image to interactive image to spotting definition's image to figuring out the words of the definition. Correct mistakes until smooth.
7. Practice running backwards from words of definition to image of definition and interactive image to seeing keyword's image to thinking of original word. Correct mistakes until smooth.

Several More Examples That Illustrate a Variety of Situations.

Good Example #1:

A person wanted to memorize the German word DER STEG. It means a footpath, a narrow path. The 'der' means 'the'. It is masculine.

1.**Start with a word and its definition.**
The person studied the spelling and the meaning.

2. **Pronounce the word and find a sound-alike word which will be the keyword.**
Then the person pronounced 'der Steg' and thought that it sounded like a 'steak' that someone might eat.

3. **Make a mental image of the keyword.**
He imagined what steaks looked like.

4. **Look at the definition and try to make a picture of it.**
Then the person imagined a footpath, overhung with tree branches, with two little children walking on it.

5. **Make a linked image, an interactive image, out of the two original images.**
Then the person imagined the children were throwing big dinner steaks on the path as they walked, leaving the path littered with juicy red steaks.

6. **Test yourself. Start with the word and try to recall the definition by using the keyword method.**
Then the person checked whether it was possible to start with 'der Steg' and think to 'footpath'.

7. **Start with the definition and try to recall the word by using the keyword method.**
And then the person tried to think in reverse from 'footpath' to 'der Steg' using these images.

Good Example #2:

This is a word from sociology.

A SOCIAL NORM. It means an idea shared by the members of a group as to what behavior people are expected to do, should do, ought to do in certain situations.

Comment: Try to understand it first.

Also the keyword method isn't good for giving you word-perfect rote memory of a complex definition like this one. It'll give you the general idea. That's why you try to understand first, so you can recall it in detail.

Keyword: Nome (city in Alaska).

Image: Map of Alaska, city on it, picture of village in snow.

Image of definition: A row of Alaskan natives dressed in traditional parkas. (**Comment: note that I make a picture to illustrate the meaning of this abstract definition. I could have used hundreds of examples. All would have worked.)

Interactive image: already made.

Test myself. Norm to Nome to image of row of native peoples all dressed alike to shared ideas of what people should do.

And test in reverse: Shared ideas as to what people should do TO people dressed alike to map of Alaska and Nome to NORM.

A BAD-example to illustrate a common mistake.

Here is an example of a common error. Suppose the word is the earth's MANTLE, a geological word meaning the rocks that make up the bedrock sea floor. Some people read MANTLE, try to make a mental image of the bedrock sea floor, and try to link the word MANTLE to their image of the seafloor.

That is NOT the keyword method. It IS a helpful, but slower, way to learn words, but it lacks the benefit of building an interactive image.

A correct example: Take MANTLE and let the word MANTLE used in a second, different meaning be the keyword. Imagine Superman's red cape, almost a mantle. Imagine the sea floor. Imagine Superman diving down through the ocean to the sea floor. . . That's a good use of a keyword.

Other ways people make mistakes.

1. They forget to make their images be interactive images. They simply think of one image and then switch over to the next. They do not merge the keyword's image with the definition's image in one mental picture.

2. They don't practice at the end. Therefore, they forget their keywords and images, and they don't find any mistakes or roughness in their imagery.

3. They choose synonyms for keywords, instead of words that sound like the new word. For example, they might start with the word LOFTY and mistakenly choose HIGH as the keyword.

Practice identifying good keywords

PRACTICE ON KEYWORDS

YOUR INSTRUCTIONS: I am going to give you a series of 10 examples of people choosing keywords as they begin memorizing. Some are good, some bad. Your task is to tell if the examples are correct. Please do this practice. Think the answers to yourself. Let yourself feel free to stop the tape, if you wish. Scientists have discovered that if people actually practice and then think about the results they get, they learn more.

KEYWORD PRACTICE #1

DER REGEN (German)--rain, a shower.

Suppose a person thought of a RAYGUN as a key word. **IS THAT RIGHT?**

Yes, it is a keyword. It's okay for a keyword to actually be two words.

KEYWORD PRACTICE #2

MAMMAL--a group of animals who give birth to living young and who nourish them with milk from mammary glands. Suppose a person thought of a COW as a keyword. **IS THAT RIGHT?**

No, it is not a keyword, because COW does not rhyme with all or part of mammal. The person has chosen a word that is an example of the definition.

KEYWORD PRACTICE #3

INFERNAL--diabolical or fiendish.

Suppose a person thought of HELLISH as a keyword. **IS THAT RIGHT?**

No, it is not a keyword, because when you pronounce HELLISH, it does not sound like INFERNAL. The person has mistakenly chosen a word that is a synonym for INFERNAL.

KEYWORD PRACTICE #4

MELIORISM--the belief that the world naturally tends to get better, and especially that it can be made better by human effort.

Suppose a person thought of MEAL as a keyword. **IS THAT RIGHT?**

Yes, it is a keyword, because it sounds like the first part of MELIORISM. A person could easily remember it if he or she had practiced all 7 steps 2 or 3 times. Try it yourself. You'll see.

KEYWORD PRACTICE #5

DER KNOPF (German)--button, knob, stud

Suppose a person thought of CAN OFF as keyword. **IS THAT RIGHT?**

Yes, it's a real keyword. It rhymes with the hard 'K' sound in German, but CAN OFF omits the hard P. That's okay, though. Partial rhymes will work. You might wonder how I get an interactive image out of CAN OFF and button, knob and stud. I see a hand reach down to an upside down can on a table, lift the CAN OFF the table and let spill out lots of buttons, knobs, and studs.

Remember to pause and think what you are learning.

KEYWORD PRACTICE #6
LITTORAL ZONE--the area of a lake which lies closer to the shore than the lower limit of the deepest rooted vegetation. Plants are in the water in the littoral zone.

Suppose a person thought of LITTER as a keyword. **IS THAT RIGHT?**

Yes, it is a valid keyword. Even though it is shorter than LITTORAL ZONE, a person could use an image of LITTER made out of bottles, cans, and waste paper to recall LITTORAL ZONE easily. Just imagine the litter in the water among shallow water plants. Easy!

KEYWORD PRACTICE #7
SPECTRUM--the series of colored bands diffracted and arranged in the order of their respective wavelengths by the passage of white light through a prism, and shading continuously from red to violet.

Suppose a person chose RAINBOW as a keyword. **IS THAT RIGHT?**

No, it is not a keyword. It does not sound like SPECTRUM. The person has made, instead, a good image for the definition.

KEYWORD PRACTICE #8
ZWISCHEN (German)--between, among.

Suppose a person thought of SWISHING as a keyword. **IS THAT RIGHT?**

Yes, it is a good keyword. It rhymes nicely.

KEYWORD PRACTICE #9
STELLAR--relating to stars.

Suppose a person thought of STAR as a keyword, because he or she knew that the Latin root of the word meant STAR. **IS THAT RIGHT?**

No, it is not a keyword. Nevertheless, the person has a good way for remembering STELLAR. But it is not the keyword method.

KEYWORD PRACTICE #10
MELANCHOLY--a sadness and depression of spirits.

Suppose a person chose COLLIE (dog) as a keyword. **IS THAT RIGHT?**

Yes, COLLIE is a good keyword. You may have wondered if it was okay for the keyword to rhyme with the last part of the word. It is. But it's better to imagine a big ripe red watermelon, because melon is the first part of the word and easier to associate to. A person could remember MELANCHOLY and its definition if he or she went through all 7 steps of the keyword method, especially the last 2 check steps. Doing vivid practice gives good memory.

Tips For Making Good Keywords

1. Choose words you can easily make pictures of. High imagery value. They can be abstract words like "justice" or "velocity" if you can make pictures representing them. A judge in black robe to illustrate justice, and a man on a fast motorcycle to represent velocity.

2. Feel free to make only approximate puns, loose sound-alike words. You can tell that your keyword is okay if you can easily think of the keyword when you look at the real word and want to recall it.

3. Make keywords like the first part of a long word, in preference to the last part -- if you have to choose a part. Why? First part is easier to remember. Example: melancholy. Imagine melon.

Examples of Interactive Imagery
Here are some examples of good interactive images. I suggest you study them to get the feel for how to make them.

MAMMAL--a category of animals who give birth to living young and nourish them with milk from mammary glands.
Keyword is MAMMA (child's word for mother)
Interactive image: My mother (Mama) sitting on a cow, which has a calf.

ZWISCHEN (German)--between, among
Keyword is SWISHING
Interactive image: I see myself standing BETWEEN two horses whose tails are swishing. I imagine myself feeling the tails hit my face, so that I have some kinesthetic mental imagery as well as visual imagery.

AUTOTROPHS--organisms that can fix energy from inorganic (nonliving) sources into organic molecules. Plants are autotrophs because they make their food from sunlight, water, and minerals.
Two keywords: AUTO (like a car) and a TROUGH for feeding pigs.
Interactive image: Seeing a red Volkswagen (AUTO) drive into pigpen and stop in the TROUGH, and then seeing vivid green plants grow up and over the top of the car, attaching themselves to the steel and eating it up.

How to make good images:
1. Make two pictures embedded together in a larger framework.
2. Place one image inside the other.
3. Picture two objects interacting, touching, affecting each other.
Why interactive images? Your brain stores the two images of keyword and definition as one unit. So if you recall one image, you automatically get access to the other.
4. Make the pictures vivid. What is vivid? You can see it clearly. Include colors, size, shape, a couple distinct details. If associating dog and broom, make the dog a specific breed, focus on its color and its size. Same with broom: how big? What color?
5. Exaggerate size; use motion and action; distort proportions.

How to Check Whether It Works:
1. Follow steps & reach accomplishment
2. Delay overnight and test yourself again and be able to remember them.

Special application:
Link several keywords together.
Do it when you have long multi-syllable words to memorize: Drosophila melanogaster, Pseudotsuga menziesii etc.
** Give example
"Drosophila melanogaster" = fruit fly. The keywords are: Drop softly melon caster. I imagine I take a melon and drop it; softly it floats down and lands on a little furniture caster, a wheel that supports the leg of a bed or chair. Technique: link them together.

Some Things to Expect When You Start:

These things come out of my own experience.

1. When you have a word and are hunting for a good keyword, you will first get a blank, helpless, empty feeling. It will seem there is no good word available. Then you will try one or more possible keywords. It often takes up to half-a-minute (sometimes longer) to think of a keyword. Of course, you'll get many keywords much faster.

2. The imagery usually comes pretty fast. One study found that experienced people could make images in 7 seconds on the average, sometimes slower, sometimes faster.

3. There are costs at first. It takes longer to give you the feeling you have learned it than reading and rehearsal take.

4. It takes imagination to think of keywords and to think of mental images.

5. It takes false starts, rejected keywords, rejected images, and a sense of frustration.

6. Your skill starts low at first, but gets better. Practice and grow better.

7. There are benefits: Longer memory. More reliable in a test than rehearsal. Works when your memory is cold or anxious. Why? Your method creates a path into your memory that you follow all the time.

You know enough now to do it today.
However, as you keep memorizing words this way, you will get better in several ways: It gets easier to think of keywords, easier to think of images, and your memory gets stronger.

Warnings:

1. Even keywords can fade with time, especially if you never think of them or never practice.

** Cure: The more practice, the more spaced the practice, the better and clearer the original keyword & images, then the more you will make a good deep memory.

2. Some people are too eager to memorize the word and they skip the first phase of learning the meaning of the word. Remember this: When you study a word and its definition to the point of thoroughly understanding it, you have done something that increases memory. Scientific research proves this.

Fact: After you use a new word a lot, you will get better and better at recalling its meaning. You will gradually drop the use of the keyword. A person will say it and you will instantly recognize it and instantly be able to give its definition. That's the ultimate goal. And that's what the keyword method will help you do. Good luck!

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